

**Amendments to the Claims:**

The listing of present claims in the application:

**Listing of Claims:**

1. (currently amended) A minimum signature solid propellant formulation comprising:  
about 6.0 to about 9.0 weight % of at least one polymeric binder, wherein said binder comprises at least one of polycaprolactone;  
about 21 to about 25 weight % of at least one energetic plasticizer;  
about 25 to about 45 weight % of ammonium dinitramide prills having a particle size of about 100  $\mu\text{m}$  to about 200  $\mu\text{m}$  as an ADN prills oxidizer; and  
about 15 to about 25 weight % of CL-20.
2. (original) The solid propellant formulation of Claim 1, wherein said CL-20 has a particle size of about 3  $\mu\text{m}$ .
3. (currently amended) The solid propellant formulation of Claim 1, wherein said binder is further selected from the group consisting of ~~polycaprolactone;~~  
~~poly(diethyleneglycol-4,8-dinitraza undecanoate)~~ poly(diethyleneglycol-4,8-dinitrazaundecanoate) and ~~polyglycidal nitrate~~ polyglycidyl nitrate.
4. (currently amended) The solid propellant formulation of Claim 1, wherein said ~~plasticizer~~ plasticizer is selected from the group consisting of butanetriol trinitrate, trimethylolethane trinitrate, ~~n-n-butyl-N-(2-nitroxyethyl)nitramine~~ n-butyl-2-nitratoethyl-nitramine and any combination thereof.
5. (currently amended) The solid propellant formulation of Claims 1, further comprising at least one member selected from a curative, a stabilizer, a cure catalyst, crosslinker, a burn rate ~~moderifier~~ modifier and a bonding agent.
6. (original) The solid propellant formulation of Claim 5, wherein said curative is selected from the group consisting of hexamethylene diisocyanate, m-tetramethylxylene diisocyanate, dimeryl diisocyanate, toluene diisocyanate, polymeric hexamethylene diisocyanate, isophorone diisocyanate, biuret triisocyanate and any combination thereof.
7. (original) The solid propellant formulation of Claim 5, wherein said cure catalyst is selected from the group consisting of triphenyl bismuth triphenyltin chloride, dibutyltin diacetate and dibutyltin dilaurate.

8. (original) The solid propellant formulation of Claim 5, wherein said stabilizer is selected from the group consisting of N-methyl-p-nitroaniline and 2-NDPA (2-nitrodiphenylamine).
9. (original) The solid propellant formulation of Claim 5, wherein said burn rate modifier is carbon black.
10. (original) The solid propellant formulation of Claim 5, wherein said crosslinker is nitrocellulose.
11. (currently amended) A minimum signature solid propellant formulation comprising:
  - about 6.0 to about 9.2 weight % of at least one polymeric binder, wherein said polymeric binder is polycaprolactone;
  - about 21 to about 28 weight % of at least one energetic plasticizer;
  - about 35 to about 45 weight % of ammonium dinitramide prills having a particle size of about 100  $\mu\text{m}$  to about 200  $\mu\text{m}$  as an ADN prills oxidizer; and
  - about 15 to about 25 weight % of CL-20.
12. (canceled)
13. (currently amended) The solid propellant formulation of Claim 11, wherein said energetic plasticizer comprises:
  - about 4.0 to about 6.0 weight % of butanetriol trinitrate;
  - about 7.0 to about 9.0 weight % of trimethylolethane trinitrate; and
  - about 10.0 to about 13.0 weight % of ~~n-n-butyl-N-(2-nitroxyethyl)nitramine~~ n-butyl-2-nitratoethyl-nitramine.
14. (original) The solid propellant formulation of Claim 11, further comprising at least one member selected from a curative, a stabilizer, a cure catalyst, crosslinker, a burn rate modifier and a bonding agent.
15. (currently amended) A minimum signature solid propellant formulation comprising:
  - about 6.0 to about 9.0 weight % of at least one polymeric binder, wherein said binder comprises poly(diethyleneglycol-4,8-dinitrazaundecanoate);
  - about 20 to about 34 weight % of at least one energetic plasticizer;
  - about 25 to about 45 weight % of ammonium dinitramide prills having a particle size of about 100  $\mu\text{m}$  to about 200  $\mu\text{m}$  as an ADN prills oxidizer; and
  - about 15 to about 25 weight % of CL-20.

16. (canceled)
17. (original) The solid propellant formulation of Claim 15, wherein said energetic plasticizer comprises:
- about 5.0 to about 12.0 weight % of butanetriol trinitrate; and
  - about 15.0 to about 22.0 weight % of trimethylolethane trinitrate.
18. (original) The solid propellant formulation of Claim 15, further comprising at least one member selected from a curative, a stabilizer, a cure catalyst, crosslinker, a burn rate modifier and a bonding agent.
19. (currently amended) A minimum signature solid propellant formulation comprising:
- about 6.0 to about 10.5 weight % of at least one polymeric binder, wherein said polymeric binder is polyglycidyl nitrate;
  - about 12 to about 32 weight % of at least one energetic plasticizer;
  - about 25 to about 45 weight % of ammonium dinitramide prills having a particle size of about 100  $\mu\text{m}$  to about 200  $\mu\text{m}$  as an ADN prills oxidizer; and
  - about 15 to about 25 weight % of CL-20.
20. (canceled)
21. (currently amended) The solid propellant formulation of Claim 19, wherein said energetic plasticizer comprises:
- about 0 to about 7.0 weight % of said butanetriol trinitrate;
  - about 10.0 to about 15.0 weight % of said trimethylolethane trinitrate; and
  - about 2.0 to about 10.0 weight % of said ~~n-n-butyl-N-(2-nitoxyethyl)nitramine~~ n-butyl-N-(2-nitoxyethyl)nitramine.
22. (original) The solid propellant formulation of Claim 19, further comprising at least one member selected from a curative, a stabilizer, a cure catalyst, a burn rate catalyst and a bonding agent.

**Amendments to the Drawings:**

There are no amendments to the drawings.